

**TRUE/FALSE. Write 'T' if the statement is true and 'F' if the statement is false.**

- 1) Small companies tend to use centralized decision making. 1) \_\_\_\_\_
- 2) Companies that decentralize split their operations into different divisions or operating units. 2) \_\_\_\_\_
- 3) Decentralization allows top management to concentrate on long-term strategic planning. 3) \_\_\_\_\_
- 4) Decentralization allows top management to hire workers with expert knowledge for each business unit. 4) \_\_\_\_\_
- 5) Decentralization helps keep a company's costs down since each business unit may have its own purchasing department. 5) \_\_\_\_\_
- 6) Decentralization is generally considered to improve customer relations. 6) \_\_\_\_\_
- 7) Goal incongruence frequently exists in centralized organizations. 7) \_\_\_\_\_
- 8) Duplication of costs is a disadvantage of decentralized organizations. 8) \_\_\_\_\_
- 9) The accounting department for a department store chain is likely to be considered an investment centre. 9) \_\_\_\_\_
- 10) The local McDonald's restaurant is likely to be considered to be an investment centre. 10) \_\_\_\_\_
- 11) Goal congruence is more likely to be achieved at a decentralized organization rather than a centralized organization. 11) \_\_\_\_\_
- 12) A product line is generally considered a profit centre. 12) \_\_\_\_\_

**MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.**

- 13) Which of the following is a disadvantage of decentralization? 13) \_\_\_\_\_
  - A) Unit managers have decreased motivation and retention.
  - B) Managers receive training and experience to allow advancement in the organization.
  - C) Unit managers may not understand the big picture of the company.
  - D) Management does not have time to concentrate on long-term strategic planning.

- 14) An advantage of decentralization is that it 14) \_\_\_\_\_  
A) reduces the cost of gathering information.  
B) creates greater responsiveness to local needs.  
C) leads to decision making consistent with company goals.  
D) focuses managers' attention on the organization as a whole.
- 15) Which of the following statements is FALSE? 15) \_\_\_\_\_  
A) A centralized structure does not empower employees to handle customer complaints directly.  
B) Decentralization can increase motivation by allowing managers to exercise greater individual initiative.  
C) Decentralization slows responsiveness to local needs for decision making.  
D) A decentralized structure forces top management to lose some control over the organization.
- 16) Which of the following is FALSE concerning profit centres and cost centres? 16) \_\_\_\_\_  
A) A cost centre can exist within a centralized organization.  
B) If a profit centre exists within a centralized organization, there cannot be any cost centres in the organization.  
C) A profit centre can exist within a decentralized organization.  
D) A cost centre can exist within a decentralized organization.
- 17) All of the following are benefits of decentralization EXCEPT 17) \_\_\_\_\_  
A) it leads to better supplier relationships.  
B) it sharpens the focus of managers.  
C) it decreases management and worker morale.  
D) it creates greater responsiveness to local needs.
- 18) The laundry department for a Ritz-Carlton hotel is likely to be classified as a(n) 18) \_\_\_\_\_  
A) cost centre. B) investment centre.  
C) profit centre. D) revenue centre.
- 19) The taxation department for department store chain is likely to be classified as a(n) 19) \_\_\_\_\_  
A) cost centre. B) investment centre.  
C) profit centre. D) revenue centre.
- 20) Pillsbury produces cookies, pizza, bread, and other food items. Pillsbury was acquired by General Mills in 2001 for \$10.4 billion. Pillsbury is likely to be classified as a(n) 20) \_\_\_\_\_  
A) cost centre. B) investment centre.  
C) profit centre. D) revenue centre.
- 21) The reservations department for a hotel chain is likely to be classified as a(n) 21) \_\_\_\_\_  
A) cost centre. B) investment centre.  
C) profit centre. D) revenue centre.

- 22) The convenience store owned by a national chain is likely to be classified as a(n) 22) \_\_\_\_\_  
A) cost centre. B) investment centre.  
C) profit centre. D) revenue centre.
- 23) An amusement park's games department which reports revenues and expenses is likely to be 23) \_\_\_\_\_  
classified as a(n)  
A) cost centre. B) investment centre.  
C) profit centre. D) revenue centre.
- 24) The human resources department for car dealership is likely to be classified as a(n) 24) \_\_\_\_\_  
A) cost centre. B) investment centre.  
C) profit centre. D) revenue centre.
- 25) Which of the following is a potential disadvantage of decentralization? 25) \_\_\_\_\_  
A) Provides training B) Duplication of costs  
C) Benchmarking D) Provides feedback
- 26) Which of the following is a potential advantage of decentralization? 26) \_\_\_\_\_  
A) Provides feedback  
B) Provides training  
C) Promotes goal congruence and coordination  
D) Benchmarking
- 27) The Frito-Lay division of PepsiCo is most likely treated as a(n) 27) \_\_\_\_\_  
A) cost centre. B) investment centre.  
C) profit centre. D) revenue centre.
- 28) The production line at Dell Computers is most likely treated as a(n) 28) \_\_\_\_\_  
A) cost centre. B) investment centre.  
C) profit centre. D) revenue centre.
- 29) The central reservation office at American Airlines is most likely treated as a(n) 29) \_\_\_\_\_  
A) cost centre. B) investment centre.  
C) profit centre. D) revenue centre.
- 30) A product line at Coca-Cola (such as the Diet Coke product line) is most likely treated as a(n) 30) \_\_\_\_\_  
A) cost centre. B) investment centre.  
C) profit centre. D) revenue centre.
- 31) The manager of the Midwest sales region at Pace Food would be in charge of a(n) 31) \_\_\_\_\_  
A) cost centre. B) investment centre.  
C) profit centre. D) revenue centre.

- 32) The manager of the corporate division of Hollister would be in charge of a(n) 32) \_\_\_\_\_  
A) cost centre. B) investment centre.  
C) profit centre. D) revenue centre.
- 33) The manager of a local Walmart would be in charge of a(n) 33) \_\_\_\_\_  
A) cost centre. B) investment centre.  
C) profit centre. D) revenue centre.
- 34) The manager of the accounting department at Nike would be in charge of a(n) 34) \_\_\_\_\_  
A) cost centre. B) investment centre.  
C) profit centre. D) revenue centre.
- 35) The manager of the Walt Disney World Resorts (a corporate division) would be in charge of a(n) 35) \_\_\_\_\_  
A) cost centre. B) investment centre.  
C) profit centre. D) revenue centre.

**ESSAY. Write your answer in the space provided or on a separate sheet of paper.**

- 36) List and describe five reasons why a company might choose to decentralize.
- 37) Discuss two potential problems associated with decentralization.

**SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.**

- 38) How does senior management typically deal with the issue of goal incongruence? 38) \_\_\_\_\_

**ESSAY. Write your answer in the space provided or on a separate sheet of paper.**

- 39) Describe what an effective performance evaluation system should do.
- 40) Identify and describe the four most common types of responsibility centres.
- 41) Provide an example of each type of responsibility centre.

**MATCHING. Choose the item in column 2 that best matches each item in column 1.**

Match the following:

- |  |                                    |           |
|--|------------------------------------|-----------|
| 42) Having formal training programs for lower level managers the company has a policy that they promote from within the company whenever possible.   | A) Decentralized<br>B) Centralized | 42) _____ |
| 43) The company is divided into several operating units.   |                                    | 43) _____ |
| 44) Johnson Enterprises is a small molding manufacturer. The owner is also the senior manager.   |                                    | 44) _____ |
| 45) Managers have the authority to make decisions about product offerings and pricing.   |                                    | 45) _____ |
| 46) In order to avoid duplication of services the company has "flattened" its organization structure and now has only one Payroll Department, one Human Resource department and one administrative headquarters. |                                    | 46) _____ |

**TRUE/FALSE. Write 'T' if the statement is true and 'F' if the statement is false.**

- |   |           |
|---|-----------|
| 47) Performance evaluation systems provide top management with a framework for maintaining control over the organization.           | 47) _____ |
| 48) Comparing company results against industry benchmarks is often less useful than comparing actual results against budget amount. | 48) _____ |
| 49) Comparing a company's achievements against best practices in the industry is called benchmarking.                               | 49) _____ |
| 50) Financial measures are lead indicators for companies.   | 50) _____ |
| 51) Financial measures are lagging indicators for companies.  | 51) _____ |
| 52) Companies benchmark their performance against the performance of their competitors and against their own past performance.      | 52) _____ |

- 53) Performance evaluation systems are a way for management to control the organization. 53) \_\_\_\_\_
- 54) The change in the amount invested in research and development is an example of a leading performance indicator. 54) \_\_\_\_\_

**MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.**

- 55) What is a limitation of financial performance measurements? 55) \_\_\_\_\_  
A) They do not motivate managers.  
B) They tend to be lag indicators.  
C) They tend to focus on long-term performance.  
D) They are not useful for benchmarking.
- 56) Which of the following aspects of a performance evaluation system best describes when targets are compared to actual results? 56) \_\_\_\_\_  
A) Communicating company's expectations  
B) Motivating managers  
C) Providing feedback  
D) Promoting goal congruence
- 57) Which of the following aspects of a performance evaluation system best describes when subunit managers are provided with performance targets? 57) \_\_\_\_\_  
A) Communicating company's expectations  
B) Benchmarking  
C) Providing feedback  
D) Promoting goal congruence
- 58) Which of the following aspects of a performance evaluation system best describes when the company's actual results are compared to industry standards? 58) \_\_\_\_\_  
A) Benchmarking  
B) Providing feedback  
C) Motivating unit managers  
D) Promoting goal congruence
- 59) Which of the following goals of a performance evaluation system is accomplished when bonuses are provided to subunit managers who achieve performance targets? 59) \_\_\_\_\_  
A) Promoting goal congruence  
B) Motivating unit managers  
C) Benchmarking  
D) Communicating expectations
- 60) Which of the following aspects of a performance evaluation system best describes when subunit performance targets are aligned with company strategy? 60) \_\_\_\_\_  
A) Benchmarking  
B) Promoting goal congruence  
C) Communicating expectations  
D) Providing feedback

- 61) Which of the following aspects of a performance evaluation system best describes when a company's actual results are compared to the results of competitors? 61) \_\_\_\_\_  
A) Communicating expectations B) Motivating unit managers  
C) Promoting goal congruence D) Benchmarking
- 62) Corrective actions are sometimes taken as a result of which of the following goals of a performance evaluation system? 62) \_\_\_\_\_  
A) Benchmarking B) Promoting goal congruence  
C) Providing feedback D) Communicating expectations
- 63) Providing subunit managers with performance results and comparing targets to actual results would be an example of 63) \_\_\_\_\_  
A) promoting goal congruence and coordination.  
B) motivating managers.  
C) providing feedback.  
D) benchmarking.
- 64) Comparing actual results to the results of competitors and comparing actual results to industry standards would be an example of 64) \_\_\_\_\_  
A) promoting goal congruence and coordination.  
B) motivating managers.  
C) providing feedback.  
D) benchmarking.
- 65) Aligning subunit performance targets with company strategy would be an example of 65) \_\_\_\_\_  
A) promoting goal congruence and coordination.  
B) motivating managers.  
C) providing feedback.  
D) benchmarking.
- 66) Providing bonuses to subunit managers who achieve performance targets would be an example of 66) \_\_\_\_\_  
A) promoting goal congruence and coordination.  
B) motivating managers.  
C) providing feedback.  
D) benchmarking.
- 67) Which of the following is not a leading performance indicator? 67) \_\_\_\_\_  
A) Number of new innovations B) Hours of sales staff training  
C) Revenue growth D) Customer satisfaction

**ESSAY. Write your answer in the space provided or on a separate sheet of paper.**

- 68) List and describe the goals of performance evaluation systems.

**MATCHING. Choose the item in column 2 that best matches each item in column 1.**

Match the following:

- |   |                               |           |
|---|-------------------------------|-----------|
| 69) Comparing Targets to actual results                           | A) Communicating Expectations | 69) _____ |
| 70) Comparing actual results to industry standards                | B) Goal Congruence            | 70) _____ |
| 71) Providing divisional managers with performance targets        | C) Benchmarking               | 71) _____ |
| 72) Aligning managers' performance targets to corporate strategy  | D) Providing Feedback         | 72) _____ |
| 73) Providing bonuses to managers who achieve performance targets | E) Motivating                 | 73) _____ |
| 74) Comparing Targets to actual results                           |                               | 74) _____ |

**ESSAY. Write your answer in the space provided or on a separate sheet of paper.**

- 75) Describe the limitations of financial performance measurement.

**TRUE/FALSE. Write 'T' if the statement is true and 'F' if the statement is false.**

- 76) The balanced scorecard considers both financial and operational performance measures. 76) \_\_\_\_\_
- 77) Customer satisfaction, operational efficiency, and employee excellence are often measured as part of the balanced scorecard approach. 77) \_\_\_\_\_
- 78) The ultimate purpose of the balanced scorecard is to give management a balanced view of the company's performance. 78) \_\_\_\_\_
- 79) KPI in the Balanced Scorecard stands for Key Performance Indicator. 79) \_\_\_\_\_
- 80) Operations is one factor of the internal business perspective of the Balanced Scorecard. 80) \_\_\_\_\_
- 81) Key Performance Indicators are used to assess how well a company's objectives have been achieved. 81) \_\_\_\_\_
- 82) Employee satisfaction is a measure of the internal business process perspective of the balanced scorecard. 82) \_\_\_\_\_



**MULTIPLE CHOICE.** Choose the one alternative that best completes the statement or answers the question.

- 83) Which of the following is the name given to the approach that recognizes that both financial and operational performance measures should be considered when evaluating company performance? 83) \_\_\_\_\_

A) The complete approach  
B) The financial and operational approach  
C) The total approach  
D) The balanced scorecard approach

84) Which of the following perspectives from the balanced scorecard helps managers answer the question, "How do we look to shareholders?" 84) \_\_\_\_\_

A) Learning and growth perspective  
B) Internal business perspective  
C) Customer perspective  
D) Financial perspective

85) Which of the following perspectives from the balanced scorecard focuses on continuing to improve and create value? 85) \_\_\_\_\_

A) Learning and growth perspective  
B) Internal business perspective  
C) Customer perspective  
D) Financial perspective

86) Which of the following perspectives from the balanced scorecard focuses on determining if customers are happy after the sale takes place? 86) \_\_\_\_\_

A) Learning and growth perspective  
B) Internal business perspective  
C) Customer perspective  
D) Financial perspective

87) Which of the following perspectives from the balanced scorecard focuses on determining the company's "climate for action"? 87) \_\_\_\_\_

A) Learning and growth perspective  
B) Internal business perspective  
C) Customer perspective  
D) Financial perspective

88) The purpose of the balanced scorecard is BEST described as helping an organization 88) \_\_\_\_\_

A) introduce innovative products and services desired by target customers.  
B) mobilize employee skills for continuous improvements in processing capabilities, quality, and response times.  
C) translate an organization's mission and strategy into a set of performance measures that help to implement the strategy.  
D) develop customer relations.

89) Which of the following is a feature of a good balanced scorecard? 89) \_\_\_\_\_

A) It provides cause-and-effect linkages that are precise.  
B) It tells the story of a company's strategy by articulating costs along the value chain.  
C) It helps to communicate the strategy to all members of the organization by translating the strategy into a coherent and linked set of understandable and measurable operational targets.  
D) The scorecard measures match those of other companies.

- 90) The number of on-time deliveries would be an example of measuring which perspective? 90) \_\_\_\_\_  
A) Financial B) Customer  
C) Internal business D) Learning and growth
- 91) Employee satisfaction would be an example of measuring which perspective? 91) \_\_\_\_\_  
A) Financial B) Customer  
C) Internal business D) Learning and growth
- 92) The number of repeat customers would be an example of measuring which perspective? 92) \_\_\_\_\_  
A) Financial B) Customer  
C) Internal business D) Learning and growth
- 93) The number of new products developed would be an example of measuring which perspective? 93) \_\_\_\_\_  
A) Financial B) Customer  
C) Internal business D) Learning and growth
- 94) The percentage of market share would be an example of measuring which perspective? 94) \_\_\_\_\_  
A) Financial B) Customer  
C) Internal business D) Learning and growth
- 95) The percentage of products with on-line help manuals would be an example of measuring which perspective? 95) \_\_\_\_\_  
A) Financial B) Customer  
C) Internal business D) Learning and growth
- 96) The number of defects found during the manufacturing process would be an example of measuring which perspective? 96) \_\_\_\_\_  
A) Financial B) Customer  
C) Internal business D) Learning and growth
- 97) Return on investment and revenue growth would be examples of 97) \_\_\_\_\_  
A) financial perspective. B) customer perspective.  
C) internal business perspective. D) learning and growth perspective.
- 98) The number of employee suggestions implemented and percentage of the sales force with access to real-time inventory levels would be examples of the 98) \_\_\_\_\_  
A) financial perspective. B) customer perspective.  
C) internal business perspective. D) learning and growth perspective.
- 99) The number of warranty claims would be an example of the 99) \_\_\_\_\_  
A) financial perspective. B) customer perspective.  
C) internal business perspective. D) learning and growth perspective.

- 100) Customer satisfaction ratings would be an example of the 100) \_\_\_\_\_  
A) financial perspective. B) customer perspective.  
C) internal business perspective. D) learning and growth perspective.
- 101) Cash flows from operations and gross margin growth would be examples of the 101) \_\_\_\_\_  
A) financial perspective. B) customer perspective.  
C) internal business perspective. D) learning and growth perspective.
- 102) New product development time would be an example of the 102) \_\_\_\_\_  
A) financial perspective. B) customer perspective.  
C) internal business perspective. D) learning and growth perspective.
- 103) The number of complaints about the company's product is a potential measure of the 103) \_\_\_\_\_  
A) customer perspective. B) internal business process.  
C) financial perspective. D) learning and growth perspective.
- 104) Manufacturing cycle efficiency is a potential measure of the 104) \_\_\_\_\_  
A) learning and growth perspective. B) internal business process perspective.  
C) financial perspective. D) customer perspective.
- 105) Measures of the balanced scorecard's customer perspective include all of the following EXCEPT 105) \_\_\_\_\_  
A) employee training on new products. B) market share.  
C) number of repeat customers. D) customer satisfaction.
- 106) Measures of the balanced scorecard's internal business process perspective include all of the 106) \_\_\_\_\_  
following EXCEPT  
A) employee turnover rates. B) defect rates.  
C) production cycle time. D) operating capabilities.

**SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.**

- 107) Organize the following list into the appropriate balanced scorecard perspectives. Include "Sustainability" as an addition to the four traditional perspectives. 107) \_\_\_\_\_

Ecoefficient logistics  
Percentage of defective product units  
Return on assets  
Number of patents  
Quantity of product waste  
Employee turnover rate  
Percentage of processes with real-time feedback  
Profit per salesperson  
Training hours per employee  
Earnings per share  
Number of new customers  
Percentage of on-time deliveries by suppliers  
Percentage of error free invoices  
Megawatt hours of electricity used  
Manufacture cycle time  
Market channel profitability  
Percentage use of recyclable materials  
Employee competence measures

**ESSAY. Write your answer in the space provided or on a separate sheet of paper.**

- 108) List the four areas of a balanced scorecard. Describe each area. Define "key performance indicator" (KPI). Give an example of a KPI for each balanced scorecard area

**SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.**

- 109) Greene Corporation is preparing its balanced scorecard for the past quarter. The balanced scorecard contains four perspectives: financial, customer, internal business process, and learning and growth. Through its strategic management planning process, Greene Corporation has selected two specific objectives for each of the four perspectives. These are: 109) \_\_\_\_\_

1. Improve post-sales service
2. Increase number of customers
3. Increase gross margin
4. Improve employee morale
5. Increase profitability of core product line
6. Increase plant safety
7. Improve employee job satisfaction
8. Increase customer retention

Greene Corporation has collected key performance indicators (KPIs) to measure progress toward achieving its specific objectives. The following table contains the KPIs and corresponding data that Greene Corporation has collected for the past quarter:

KPI	Goal	Actual
Gross margin growth	24%	23%
Number of Customers	12,800	13,500

Number of Customers	12,800	13,500
Number of lost time accidents	1	3
Number of repeat customers	8,900	8,700
Employee turnover	5%	7.5%
Average repair time (in hours)	1.25	1.15
Product line profit margin	18%	15%
Employee satisfaction (1-5)	4	3.8

Prepare a balanced scorecard report for Greene Corporation, using the following format:

Perspective	Objective	KPI	Goal	Actual	Met (y/n)
Financial					
Customer					
Internal Process					
Learning and growth					

Place each of the specific objectives listed under the appropriate perspective heading in the report. Select a KPI from the list of KPIs that would be appropriate to measure progress to each objective. In the last column in the balanced scorecard report, place a "y" if the associated KPI goal has been achieved and a "n" if hasn't been achieved.

**MATCHING. Choose the item in column 2 that best matches each item in column 1.**

Match the following:

- |   |                                    |            |
|---|------------------------------------|------------|
| 110) Average length of the production process | A) Financial perspective           | 110) _____ |
| 111) Employee promotion rate                  | B) Learning and growth perspective | 111) _____ |
| 112) Cash flow from operations                | C) Internal business perspective   | 112) _____ |
| 113) Asset turnover                           | D) Customer perspective            | 113) _____ |
| 114) Earnings growth                          |                                    | 114) _____ |
| 115) Finished products per employee per day   |                                    | 115) _____ |
| 116) Machine downtime                         |                                    | 116) _____ |
| 117) Customer satisfaction ratings            |                                    | 117) _____ |

118) Average machine setup time	A) Learning and growth perspective	118) _____
119) Number of new customers	B) Internal business perspective	119) _____
120) Customer satisfaction ratings	C) Customer perspective	120) _____
121) Wait time per order before start of production	D) Financial perspective	121) _____
122) Percentage of defective product units		122) _____
123) Return on assets		123) _____
124) Product cost per unit		124) _____
125) Employee turnover rate		125) _____
126) Average job-related training hours per employee		126) _____
127) Return on equity		127) _____
128) Customer profitability		128) _____
129) Percentage of on-time deliveries by suppliers		129) _____

Match the following:

130) Acquire new customers	A) Internal business perspective	130) _____
131) On-time delivery by suppliers	B) Customer perspective	131) _____
132) Develop profitable customers	C) Financial perspective	132) _____
133) Improve manufacturing quality	D) Learning and growth perspective	133) _____
134) Increase shareholder value		134) _____
135) Retain customers		135) _____
136) Enhance employee skills		136) _____
137) Decrease per unit variable cost		137) _____
138) Improve post-sales service		138) _____
139) Increase number of customers		139) _____
140) Improve employee job satisfaction		140) _____
141) Increase gross margin		141) _____
142) Increase profitability of core product line		142) _____
143) Increase plant safety		143) _____
144) Improve employee moral		144) _____
145) Increase customer retention		145) _____

**TRUE/FALSE. Write 'T' if the statement is true and 'F' if the statement is false.**

146) Responsibility accounting performance reports capture the financial performance of cost, revenue and profit centres.	146) _____
147) The difference between actual results and budgeted amounts is called a variance.	147) _____
148) Cost centre performance reports typically focus on the static budget variance.	148) _____

- 149) Management by exception is used to determine which variances to investigate. 149) \_\_\_\_\_
- 150) Cost centre performance reports typically focus on the flexible budget variance. 150) \_\_\_\_\_
- 151) Revenue centre performance reports often highlight both the flexible budget variance and the sales volume variance. 151) \_\_\_\_\_
- 152) Management by exception saves management time by dictating that managers pay attention to only unfavourable variances. 152) \_\_\_\_\_
- 153) A cost centre will show revenues and costs. 153) \_\_\_\_\_
- 154) Variances which exceed a certain dollar amount or a certain percentage are the variances which are investigated when using management by exception. 154) \_\_\_\_\_
- 155) Cost centre performance reports typically focus on the flexible budget variance. 155) \_\_\_\_\_

**MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.**

- 156) Management by exception would dictate that the manager investigate which of the following variances? 156) \_\_\_\_\_  
 A) Variances which are greater than a certain dollar amount or percentage  
 B) Variances which are less than a certain dollar amount or percentage  
 C) All unfavourable variances  
 D) All favourable and unfavourable variances
- 157) The performance report for which of the following responsibility centres would typically include revenues and costs? 157) \_\_\_\_\_  
 A) Sales centre B) Profit centre  
 C) Cost centre D) Revenue centre
- 158) Which of the following responsibility centres use a performance report that compares only actual revenues and budgeted revenues? 158) \_\_\_\_\_  
 A) Investment centre B) Profit centre  
 C) Revenue centre D) Cost centre
- 159) What is it called when managers look at the size of the variances between actual results and budgeted amounts in order to determine which variances should be investigated? 159) \_\_\_\_\_  
 A) Management by exception B) Management by decision  
 C) Management by variance D) Management by budget



- 160) With \_\_\_\_\_, managers look at the size of the variances between actual results and budgeted amounts to determine which variances a manager should investigate. 160) \_\_\_\_\_  
 A) management by variance B) management by decision  
 C) management by exception D) management by budget
- 161) The difference in dollars between amounts in the static budget and the flexible budget is called the 161) \_\_\_\_\_  
 A) actual variance. B) sales volume variance.  
 C) static budget variance. D) flexible budget variance.
- 162) The difference between amounts in the static budget and the flexible budget for a revenue centre is caused by which of the following? 162) \_\_\_\_\_  
 A) The selling price per unit  
 B) The number of units sold differs from planned sales levels  
 C) The cost of sales  
 D) Both the selling price and the number of units sold
- 163) What is the cause of a favourable sales volume variance for revenues? 163) \_\_\_\_\_  
 A) Actual sales in dollars are greater than the master budget sales in dollars.  
 B) Actual sales in dollars are less than the static budget sales in dollars.  
 C) The flexible budget sales in dollars are greater than the static budget sales in dollars.  
 D) Actual net income for the subunit is greater than budgeted net income.
- 164) The performance evaluation of cost centres is typically based on which of the following? 164) \_\_\_\_\_  
 A) Flexible budget variance B) ROI  
 C) Static budget variance D) Sales volume variance
- 165) Gretzel had the following financial results for last month. Which type of responsibility centre do the financial results reflect? 165) \_\_\_\_\_

Gretzel Subunit	Actual	Flexible Budget	Flexible Budget Variance (U or F)	% of Variance (U or F)
Direct materials	\$30,000	\$28,000	\$2,000 U	7.14% U
Direct labour	15,000	14,000	1,000 U	7.14% U
Indirect labour	25,000	22,000	3,000 U	13.64% U
Utilities	12,000	10,000	2,000 U	20.0% U
Depreciation	25,000	25,000	0	0
Repairs and Maintenance	4,000	5,000	1,000 F	20.00% F
Total	\$111,000	\$104,000	\$7,000 U	6.73% U

- A) Revenue centre B) Profit centre  
 C) Investment centre D) Cost centre

166) Chardon had the following financial results for last month. What type of responsibility centre do these financial results reflect? 166) \_\_\_\_\_

One store	Actual	Flexible Budget	Flexible Budget Variance (U or F)	% of Variance (U or F)
Revenues	\$220,000	\$200,000	\$20,000 F	10.00% F
Operating Expenses	80,000	70,000	10,000 U	14.29% U
Income from operations before service dept. charges	140,000	130,000	10,000 F	7.69% F
Service department charges	40,000	40,000	0	0
Income from operations	100,000	90,000	10,000 F	11.11% F

- A) Revenue centre  
B) Profit centre  
C) Investment centre  
D) Cost centre

167) Selle had the following financial results for last month. What type of responsibility centre do these reflect? 167) \_\_\_\_\_

Selle Co. — Subunit X Revenue by Product	Actual	Flexible Budget Variance	Flexible Budget	Sales Volume Variance	Static (Master) Budget
WD-40	\$630,000	\$10,000 F	\$620,000	\$20,000 F	\$600,000
WD-60	520,000	30,000 U	550,000	40,000 F	510,000
WD-80	125,000	5,000 U	130,000	10,000 U	140,000
QD-40	225,000	25,000 F	200,000	40,000 U	240,000
QD-60	425,000	5,000 F	420,000	20,000 F	400,000
Total	\$1,925,000	\$5,000 F	\$1,920,000	\$30,000 F	\$1,890,000

- A) Revenue centre  
B) Profit centre  
C) Investment centre  
D) Cost centre

**SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.**

168) The financial results for one of the subunits of Factory Six Racing is presented in the partially completed performance evaluation report below.

168) \_\_\_\_\_

Subunit - CobraST	Actual	Flexible Budget	Flexible Budget Variance (U or F)	Percent Variance (U or F)
Sales	\$243,000	\$225,000		
Cost of goods sold	<u>130,000</u>	<u>125,000</u>		
Gross margin	\$113,000	\$100,000		
Operating expenses	<u>26,000</u>	<u>25,000</u>		
Operating income before service department charges	\$87,000	\$75,000		
Service department charges (allocated)	<u>17,500</u>	<u>12,500</u>		
Operating income	<u>\$69,500</u>	<u>\$62,500</u>		

\* Flexible budget variance/Flexible budget

Required:

1. Complete the performance report rounding to three decimal places.
2. Based on the data presented, what type of responsibility centre is this subunit?
3. Which items should be investigated if part of management's decision criteria is to investigate all variances equal to or exceeding \$5,000 and exceeding 10% ( both criteria must be met)?

169) The financial results for one of the subunits of Factory Six Racing is presented in the partially completed performance evaluation report below.

169) \_\_\_\_\_

Subunit - CobraST	Actual	Flexible Budget	Flexible Budget Variance (U or F)	Percent Variance (U or F)
Sales	\$194,000	\$180,000		
Cost of goods sold	104,000	100,000		
Gross margin	\$90,000	\$80,000		
Operating expenses	21,000	20,000		
Operating income before service department charges	\$69,000	\$60,000		
Service department charges (allocated)	14,000	10,000		
Operating income	<u>\$55,000</u>	<u>\$50,000</u>		

Required:

1. Complete the performance report rounding to three decimal places.
2. Based on the data presented, what type of responsibility centre is this subunit?
3. Which items should be investigated if part of management's decision criteria is to investigate all variances equal to or exceeding \$5,000 and exceeding 10% ( both criteria must be met)?

170) The financial results for one of the subunits of Factory Six Racing is presented in the partially completed performance evaluation report below.

170) \_\_\_\_\_

Subunit - CobraST	Actual	Flexible Budget	Flexible Budget Variance (U or F)	Percent Variance (U or F)
Sales	\$180,000	\$194,000		
Cost of goods sold	100,000	104,000		
Gross margin	\$80,000	\$90,000		
Operating expenses	20,000	21,000		
Operating income before service department charges	\$60,000	\$69,000		
Service department charges (allocated)	10,000	14,000		
Operating income	<u>\$50,000</u>	<u>\$55,000</u>		

Required:

1. Complete the performance report rounding to three decimal places.
2. Based on the data presented, what type of responsibility centre is this subunit?
3. Which items should be investigated if part of management's decision criteria is to investigate all variances equal to or exceeding \$5,000 and exceeding 10% ( both criteria must be met)?

171) A company's flexible budget for 93,000 units of production showed sales of \$300,000; variable costs of \$150,000; and fixed costs of \$90,000. What net operating income would you expect the company to earn if it produces and sells 98,000 units? (Assume 98,000 units is in the relevant range.)

171) \_\_\_\_\_

Use the information below to answer the following questions:

The accountant for a subunit of Speedi Skates went on vacation before completing the subunit's monthly performance report. This is as far as she got:

Revenue by product	Actual	Flexible Budget Variance	Flexible Budget	Sales Volume Variance	Master Budget
Hockey					
G1	\$262,000		\$261,000		\$ 250,000
G2	\$162,000		\$165,000	\$ 10,000 U	\$ 175,000
Figure					
S1	\$ 66,000	\$ 1,000 U	\$ 67,000		\$ 68,000
S2	\$ 56,000			\$ 1,000 F	\$ 62,000
Recreation					
M1	\$ 35,000		\$ 31,000		\$ 32,000
L1	\$ 26,000			\$ 3,000 U	\$ 31,000
Total	\$607,000				\$ 618,000

172) Complete the performance evaluation report

172) \_\_\_\_\_

173) Based on the data presented, what kind of responsibility centre is represented?

173) \_\_\_\_\_

174) What variance should be investigated if management's criteria is to investigate variances greater than 5% of \$10,000?

174) \_\_\_\_\_

**TRUE/FALSE. Write 'T' if the statement is true and 'F' if the statement is false.**

175) The duties of an investment centre manager are similar to those of a CFO.

175) \_\_\_\_\_

176) Companies evaluate investment centres the way they evaluate profit centres.

176) \_\_\_\_\_

177) Return on Investment (ROI) is defined as operating income divided by total assets.

177) \_\_\_\_\_

178) The profit margin is operating income divided by sales.

178) \_\_\_\_\_

179) Residual Income (RI) equals operating income less minimum acceptable income.

179) \_\_\_\_\_

180) Economic Value Added (EVA) is a special type of Return on Investment (ROI) calculation.

180) \_\_\_\_\_

- 181) When calculating Economic Value Added (EVA), the weighted average cost of capital replaces the target Return on Investment (ROI) as the expected rate of return. 181) \_\_\_\_\_
- 182) Residual income is used in the denominator when calculating ROI. 182) \_\_\_\_\_
- 183) Profit margin is calculated as sales divided by operating income. 183) \_\_\_\_\_
- 184) The use of return on investment (ROI) as a performance measure may lead managers to reject projects that would be profitable for the company as a whole. 184) \_\_\_\_\_
- 185) Residual income is the difference between revenues and expenses. 185) \_\_\_\_\_
- 186) One serious drawback of financial measures is their short-term focus. 186) \_\_\_\_\_
- 187) Including nonproductive assets in the ROI calculation unfairly increases the reported rate of return. 187) \_\_\_\_\_

**MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.**

- 188) What will happen to return on investment (ROI) if selling and administrative expenses decrease while everything else remains the same? 188) \_\_\_\_\_  
 A) ROI will increase.  
 B) ROI will not be affected.  
 C) ROI will decrease.  
 D) We cannot determine the effect from the information provided.
- 189) What will happen to return on investment (ROI) if a company must decrease its selling price while all of the company's expenses remain constant? 189) \_\_\_\_\_  
 A) ROI will increase.  
 B) ROI will not be affected.  
 C) ROI will decrease.  
 D) We cannot determine the effect from the information provided.
- 190) Using what measure may cause a manager to reject a project that would be profitable for the company as a whole? 190) \_\_\_\_\_  
 A) EVA  
 B) Residual income  
 C) Operating income  
 D) ROI
- 191) How can a manager increase return on investment (ROI)? 191) \_\_\_\_\_  
 A) Increase operating expenses  
 B) Decrease sales  
 C) Decrease operating expenses  
 D) Increase operating assets

- 192) Which of the following financial performance measures can be used to compare potential projects of different sizes? 192) \_\_\_\_\_
- A) EVA B) Operating income  
C) Residual income D) ROI

Use the information below to answer the following question(s):

Assume the Cell Phone Division of the First Electronics Corporation had the following results last year (in thousands). Management target rate of return is 10% and the weighted average cost of capital is 7%. Its effective tax rate is 30%.

Sales	\$6,000,000
Operating income	900,000
Total assets	3,000,000
Current liabilities	750,000

- 193) What is the First Electronics Corporation cell phone division's profit margin? 193) \_\_\_\_\_
- A) 30.00% B) 200.00% C) 15.00% D) 25.00%
- 194) What is the First Electronics Corporation cell phone division's asset turnover? 194) \_\_\_\_\_
- A) 2.0 B) 3.3 C) 6.7 D) 4.0
- 195) What is the First Electronics Corporation cell phone division's Return on Investment (ROI)? 195) \_\_\_\_\_
- A) 30.00% B) 25.00% C) 15.00% D) 200.00%
- 196) What is the First Electronics Corporation cell phone division's Residual Income (RI)? 196) \_\_\_\_\_
- A) \$472,500 B) \$300,000 C) \$600,000 D) \$690,000
- 197) What is the First Electronics Corporation cell phone division's Economic Value Added (EVA)? 197) \_\_\_\_\_
- A) \$472,500 B) \$600,000 C) \$157,500 D) \$630,000
- 198) Roberts Corporation has an ROI of 23%, total assets of \$5,250,000, and current liabilities of \$950,000. What is Roberts Corporation's operating income? 198) \_\_\_\_\_
- A) \$218,500 B) \$4,130,435 C) \$22,826,087 D) \$1,207,500

Use the information below to answer the following questions:

Select data from Eleven-Five Corporation's most recent year of operations are presented below:

Operating Income	\$ 9,000,000
Total Assets	\$15,000,000
Current Liabilities	\$ 5,500,000
Sales	\$160,000,000

Target rate of return	17%
Weight Average Cost of Capital	12%
Tax Rate	25%

- 199) What is Eleven-Five's Profit Margin? 199) \_\_\_\_\_  
A) 7.250% B) 3.4375% C) 5.625% D) 6.000%
- 200) What is Eleven-Five's Asset Turnover? 200) \_\_\_\_\_  
A) 0.60 B) 10.67 C) 1.63 D) 17.78
- 201) What is Eleven-Five's Return on Investment? 201) \_\_\_\_\_  
A) 60.00% B) 6.25% C) 9.00% D) 15.00%
- 202) What is Eleven-Five's Residual Income? 202) \_\_\_\_\_  
A) \$6,450,000 B) \$1,530,000 C) \$2,720,000 D) \$2,550,000
- 203) What is Eleven-Five's Economic Value Added? 203) \_\_\_\_\_  
A) \$ 9,000,000 B) \$ 5,610,000 C) \$ 6,450,000 D) \$ 5,500,000

Use the information below to answer the following questions:

Select data from Five-Eleven Corporation's (a chain of convenience stores) most recent year of operations are presented below

Operating Income	\$ 1,150,000
Total Assets	\$12,000,000
Current Liabilities	\$ 1,050,000
Sales	\$28,750,000

Target rate of return	9%
Weight Average Cost of Capital	8%
Tax Rate	30%

- 204) What is Five-Eleven's Profit Margin? 204) \_\_\_\_\_  
A) 8.0% B) 2.4% C) 4.0% D) 9.0%
- 205) What is Five-Eleven's Return on Investment? 205) \_\_\_\_\_  
A) 8.0125% B) 9.5833% C) 4.375% D) 2.4310%



- 206) What is Five-Eleven's Asset Turnover?  
 A) 2.4                      B) 8.0                      C) 4.0                      D) 3.2                      206) \_\_\_\_\_
- 207) What is Five-Eleven's Residual Income?  
 A) \$ 70,000                      B) \$ 150,000                      C) ( \$70,000)                      D) \$ 1,050,000                      207) \_\_\_\_\_
- 208) What is Five-Eleven's Economic Value Added?  
 A) \$ 70,000                      B) ( \$71,000)                      C) \$ 1,050,000                      D) \$ 150,000                      208) \_\_\_\_\_
- 209) Sarasota Corporation has operating income of \$72,000, a profit margin of 12%, and asset turnover of 3.0. The return on investment (ROI) for Sarasota Corporation would be closest to  
 A) 1%.                      B) 36%.                      C) 4%.                      D) 120%.                      209) \_\_\_\_\_
- 210) Falcone Company has \$72,000 of operating income, a profit margin of 12%, a target rate of return of 10%, and asset turnover of 3.0. The sales in dollars for Falcone Company would be closest to  
 A) \$216,000.                      B) \$8,640.                      C) \$600,000.                      D) \$24,000.                      210) \_\_\_\_\_
- 211) Powell Enterprises has operating income of \$72,000. Its return on investment (ROI) is 36%, while its target rate of return is 10%. The total assets of Powell Enterprises would be closest to  
 A) \$7,200.                      B) \$720,000.                      C) \$25,920.                      D) \$200,000.                      211) \_\_\_\_\_
- 212) Rose Company has a target rate of return of 10%, an ROI of 36%, and asset turnover of 3.0. The profit margin for Rose Company would be closest to  
 A) 30%.                      B) 108%.                      C) 3%.                      D) 12%.                      212) \_\_\_\_\_
- 213) Flash Corporation has operating income of \$180,000, a profit margin of 15%, and asset turnover of 2.0. The return on investment (ROI) for Flash Corporation would be closest to  
 A) 2%.                      B) 8%.                      C) 125%.                      D) 30%.                      213) \_\_\_\_\_
- 214) Kleener Company has a profit margin of 15%, a target rate of return of 12%, and asset turnover of 2.0. The sales in dollars for Kleener Company would be closest to  
 A) \$27,000.                      B) \$1,200,000.                      C) \$90,000.                      D) \$360,000.                      214) \_\_\_\_\_
- 215) Rickett Company has operating income of \$180,000. Its return on investment (ROI) is 30%, while its target rate of return is 12%. The total assets of Rickett Company would be closest to  
 A) \$1,500,000.                      B) \$600,000.                      C) \$21,600.                      D) \$54,000.                      215) \_\_\_\_\_
- 216) Prescott Enterprises has a target rate of return of 12%, an ROI of 30%, and asset turnover of 2.0. The profit margin for Prescott Enterprises would be closest to  
 A) 6%.                      B) 60%.                      C) 24%.                      D) 15%.                      216) \_\_\_\_\_

Use the information below to answer the following question(s):

The Tandem division of the Great Adventures Cycles Company had the following results last year (in thousands).

Sales	\$4,000,000
Operating income	\$480,000
Total assets	\$2,000,000
Current liabilities	\$300,000

Management's target rate of return is 10% and the weighted average cost of capital is 8%. Tandem's effective tax rate is 35%.

217) What is the Tandem division's profit margin? 217) \_\_\_\_\_  
 A) 12.00% B) 7.50% C) 200.00% D) 24.00%

218) What is the Tandem division's asset turnover? 218) \_\_\_\_\_  
 A) 13.3 B) 8.3 C) 2.0 D) 4.2

219) What is the Tandem division's Return on Investment (ROI)? 219) \_\_\_\_\_  
 A) 24.00% B) 200.00% C) 7.50% D) 12.00%

220) What is the Tandem division's Residual Income (RI)? 220) \_\_\_\_\_  
 A) \$280,000 B) \$152,000 C) \$8,000,000 D) \$320,000

221) The Tandem division of the Great Adventures Cycles Company had the following results last year (in thousands). 221) \_\_\_\_\_

Sales	\$4,000,000
Operating income	\$480,000
Total assets	\$2,000,000
Current liabilities	\$300,000

Management's target rate of return is 10% and the weighted average cost of capital is 8%. Its effective rate is 40%.

What is the Tandem division's Economic Value Added (EVA)?  
 A) \$280,000 B) \$288,000 C) \$152,000 D) \$136,000

Use the information below to answer the following question(s):

Selected financial data for The Plastic Lumber Company's Outdoor Furniture Division is as follows:

Sales	\$2,100,000
Operating income	\$420,000
Total assets	\$1,050,000
Current liabilities	\$200,000
Target rate of return	12%
Weighted average cost of capital	10%

- 222) What is The Plastic Lumber Company's Outdoor Furniture Division profit margin? 222) \_\_\_\_\_  
A) 200.00% B) 20.00% C) 40.00% D) 9.52%
- 223) What is The Plastic Lumber Company's Outdoor Furniture Division asset turnover? 223) \_\_\_\_\_  
A) 10.5 B) 5.0 C) 2.5 D) 2.0
- 224) What is The Plastic Lumber Company's Outdoor Furniture Division return on investment? 224) \_\_\_\_\_  
A) 9.52% B) 40.00% C) 20.00% D) 2000.00%
- 225) What is The Plastic Lumber Company's Outdoor Furniture Division residual income? 225) \_\_\_\_\_  
A) \$126,000 B) \$396,000 C) \$294,000 D) \$315,000

Use the information below to answer the following question(s):

The following data relates to the Miracle Corporation and its Toy Division.

Toy Division sales	\$8,000,000
Toy Division operating income	\$480,000
Toy Division total assets	\$2,000,000
Toy Division current liabilities	\$600,000
Corporate target rate of return	14%
Corporate weighted average cost of capital	10%
Corporate effective tax rate	30%

- 226) What is the Toy Division's profit margin? 226) \_\_\_\_\_  
A) 30% B) 6% C) 24% D) 400%
- 227) What is the Toy Division's asset turnover? 227) \_\_\_\_\_  
A) 3.3 B) 16.7 C) 4.0 D) 4.2
- 228) What is the Toy Division's Return on Investment (ROI)? 228) \_\_\_\_\_  
A) 30% B) 24% C) 400% D) 6%
- 229) What is the Toy Division's Residual Income (RI)? 229) \_\_\_\_\_  
A) \$196,000 B) \$(640,000) C) \$200,000 D) \$280,000

- 230) What is the Toy Division's Economic Value Added (EVA)? 230) \_\_\_\_\_  
 A) \$196,000 B) \$336,000 C) \$140,000 D) \$200,000

Use the information below to answer the following question(s):

The Beverage Division of Natural Foods Corporation had sales of \$4,200,000 and operating income of \$840,000 last year. The total assets of the Beverage Division were \$1,680,000, while current liabilities were \$360,000. Natural Foods Corporation's target rate of return is 9%, while its weighted average cost of capital is 7%. The effective tax rate for the company is 40%.

- 231) What is the Beverage Division's profit margin? 231) \_\_\_\_\_  
 A) 8.57% B) 50.00% C) 20.00% D) 250.00%
- 232) What is the Beverage Division's asset turnover? 232) \_\_\_\_\_  
 A) 2.0 B) 5.0 C) 2.5 D) 11.7
- 233) What is the Beverage Division's Return on Investment (ROI)? 233) \_\_\_\_\_  
 A) 250.00% B) 20.00% C) 50.00% D) 8.57%
- 234) What is the Beverage Division's Residual Income (RI)? 234) \_\_\_\_\_  
 A) \$411,600 B) \$688,800 C) \$151,200 D) \$722,400
- 235) What is the Beverage Division's Economic Value Added (EVA)? 235) \_\_\_\_\_  
 A) \$92,400 B) \$504,000 C) \$688,800 D) \$411,600

Use the information below to answer the following question(s):

Selected financial data for the Entertainment Division of Magic Enterprises is as follows:

Sales	\$7,200,000
Operating income	\$1,440,000
Total assets	\$3,000,000
Current liabilities	\$800,000
Required rate of return	8%
Weighted average cost of capital	6%

- 236) What is the Entertainment Division's profit margin? 236) \_\_\_\_\_  
 A) 11.11% B) 48.00% C) 20.00% D) 240.00%
- 237) What is the Entertainment Division's asset turnover? 237) \_\_\_\_\_  
 A) 2.1 B) 9.0 C) 5.0 D) 2.4
- 238) What is the Entertainment Division's return on investment? 238) \_\_\_\_\_  
 A) 240.00% B) 20.00% C) 48.00% D) 11.11%

- 239) What is the Entertainment Division's residual income? 239) \_\_\_\_\_  
 A) \$640,000 B) \$240,000 C) \$1,200,000 D) \$864,000

Use the information below to answer the following question(s):

Selected financial data for the Photocopies Division of Elizabeth's Business Machines is as follows:

Sales	\$6,800,000
Operating income	\$2,040,000
Total assets	\$2,720,000
Current liabilities	\$350,000
Required rate of return	13%
Weighted average cost of capital	8%

- 240) What is the Photocopier Division's sales margin? 240) \_\_\_\_\_  
 A) 75.00% B) 5.15% C) 250.00% D) 30.00%
- 241) What is the Photocopier Division's capital turnover? 241) \_\_\_\_\_  
 A) 1.3 B) 19.4 C) 3.3 D) 2.5
- 242) What is the Photocopier Division's return on investment? 242) \_\_\_\_\_  
 A) 250.00% B) 75.00% C) 30.00% D) 5.15%
- 243) What is the Photocopier Division's residual income? 243) \_\_\_\_\_  
 A) \$1,156,000 B) \$1,686,400 C) \$353,600 D) \$1,690,000

Use the information below to answer the following question(s):

The following data relates to Logan Electric and its Light Bulb Division.

Division sales	\$750,000
Division operating income	\$7,500,000
Division total assets	\$3,000,000
Division current liabilities	\$550,000
Corporate target rate of return	15%
Corporate weighted average cost of capital	11%
Corporate effective income tax rate	35%

- 244) What is the Light Bulb Division's sales margin? 244) \_\_\_\_\_  
 A) 25% B) 18.33% C) 10% D) 30.6%
- 245) What is the Light Bulb Division's asset turnover? 245) \_\_\_\_\_  
 A) 2.5 B) 5.5 C) 4.0 D) 10.0
- 246) What is the Light Bulb Division's Return on Investment (ROI)? 246) \_\_\_\_\_  
 A) 30.6% B) 25% C) 10% D) 18.33%

- 247) What is the Light Bulb Division's Residual Income (RI)? 247) \_\_\_\_\_  
 A) \$300,000 B) \$420,000 C) \$218,000 D) \$(375,000)
- 248) What is the Light Bulb Division's Economic Value Added (EVA)? 248) \_\_\_\_\_  
 A) \$4,545,000 B) \$7,230,500 C) \$4,507,500 D) \$4,605,500

**SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.**

- 249) The Frozen Foods Division of AgraFoods Corporation had sales of \$8,400,000 and operating income of \$1,848,000 last year. The total assets of the Frozen Foods Division were \$3,500,000, while current liabilities were \$850,000. AgraFoods Corporation's target rate of return is 12%, while its weighted average cost of capital is 8%. The effective tax rate for the company is 40%. 249) \_\_\_\_\_

Required:

1. Calculate the profit margin.
2. Calculate the asset turnover.
3. Calculate the return on investment (ROI).
4. Calculate the residual income.
5. Calculate the Economic Value Added (EVA).

- 250) The Hotel Division of Treasure Island Corporation had the following results last year. 250) \_\_\_\_\_

Sales	\$15,000,000
Operating income	\$6,000,000
Total assets	\$10,000,000
Current liabilities	\$3,000,000

Management's target rate of return is 14% and the weighted average cost of capital is 10%. effective tax rate is 35%.

Required:

1. Calculate the return on investment (ROI).
2. Calculate the residual income.
3. Calculate the Economic Value Added (EVA).

- 251) The Engine Division of The Cleveland Automotive Corporation had sales of \$7,200,000 an operating income of \$864,000 last year. The total assets of the Engine Division were \$3,200 while current liabilities were \$800,000. The Cleveland Automotive Corporation's target rate of return is 13% while its weighted average cost of capital is 9%. The effective tax rate for the company is 45%. 251) \_\_\_\_\_

Required:

- a. Calculate the sales margin.
- b. Calculate the capital turnover.
- c. Calculate the return on investment (ROI).
- d. Calculate the residual income.

252) The Jazz Division of Heights Recording Corporation had the following results last year.

252) \_\_\_\_\_

Sales	\$10,000,000
Operating income	\$2,200,000
Total assets	\$4,000,000
Current liabilities	\$2,500,000

Management's target rate of return is 12% and the weighted average cost of capital is 9%. The effective tax rate is 40%.

Required:

- Calculate the return on investment (ROI).
- Calculate the residual income.

253) Data on three unrelated companies are given in the following table.

253) \_\_\_\_\_

	Alpha Company	Beta Industries	Capa Inc
Sales	\$54,000	?	\$261,000
Operating income	\$21,600	\$58,950	
Total assets	\$36,000	?	
Profit margin	?	15%	10%
Asset turnover	?	4.80	
Return on investment (ROI)	?	?	29%
Target rate of return	9%	20%	
Residual income	?	?	\$10,800

Fill in the missing information.

254) Data on three unrelated companies are given in the following table.

254) \_\_\_\_\_

	Alpha Company	Beta Industries	Capa Inc
Sales	\$925,000	?	\$390,000
Operating income	\$64,750	\$179,400	?
Total assets	\$185,000	?	?
Profit margin	?	10%	18%
Asset turnover	?	4.6	?
Return on investment (ROI)	?		54%
Target rate of return	20%	25%	?
Residual income	?	?	\$31,200

Fill in the missing information.

255) Data on three unrelated companies are given in the following table.

255) \_\_\_\_\_

	Comfy Inn	Hamton Inn	Night Inn
Revenue	\$600,000	?	\$1,500,000
Operating income	\$156,000	\$252,000	?
Total assets	\$400,000	?	?
Profit margin	?	30%	30%
Asset turnover	?	0.6	?
Return on investment (ROI)	?	?	20%
Target rate of return	25%	15.0%	?
Residual income	?	?	\$45,000

Fill in the missing information.

256) The following information for Comfy Inns was available for the past year:

256) \_\_\_\_\_

Sales	\$600,000
Operating Income	\$156,000
Total Assets	\$400,000
Current Liabilities	\$165,000

Management has a 25% target rate of return. Comfy's weighted average cost of capital is 1 and its effective tax rate is 32%.

Calculate the EVA.

257) The following information for Hamton Inns was available for the past year:

257) \_\_\_\_\_

Sales	\$840,000
Operating Income	\$560,000
Total Assets	\$2,250,000
Current Liabilities	\$250,000

Management has a 25% target rate of return. Hamton's weighted average cost of capital is and its effective tax rate is 32%.

Calculate the EVA.



258) The following information for Night Inns was available for the past year:

258) \_\_\_\_\_

Sales	\$1,500,000
Operating Income	\$540,000
Total Assets	\$1,400,000
Current Liabilities	\$250,000

Management has a 25% target rate of return. Night's weighted average cost of capital is 17% and its effective tax rate is 32%.

Calculate the EVA.

259) The following information for Alpha Company was available for the past year:

259) \_\_\_\_\_

Sales	\$925,000
Operating Income	\$64,750
Total Assets	\$185,000
Current Liabilities	\$25,000

Management has a 25% target rate of return. Alpha Company's weighted average cost of capital is 17% and its effective tax rate is 32%.

Calculate the EVA.

260) The following information for Alpha Company was available for the past year:

260) \_\_\_\_\_

Sales	\$1,794,000
Operating Income	\$179,400
Total Assets	\$390,000
Current Liabilities	\$40,000

Management has a 25% target rate of return. Alpha Company's weighted average cost of capital is 17% and its effective tax rate is 32%.

Calculate the EVA.

261) The following information for Alpha Company was available for the past year:

261) \_\_\_\_\_

Sales	\$390,000
Operating Income	\$34,000
Total Assets	\$130,000
Current Liabilities	\$15,000

Management has a 25% target rate of return. Alpha Company's weighted average cost of capital is 17% and its effective tax rate is 32%.

Calculate the EVA.

**ESSAY. Write your answer in the space provided or on a separate sheet of paper.**

262) Identify and discuss the limitations of Financial Performance measures like ROI, RI and EVA

Answer Key

Testname: UNTITLED2

- 1) TRUE
- 2) TRUE
- 3) TRUE
- 4) TRUE
- 5) FALSE
- 6) TRUE
- 7) FALSE
- 8) TRUE
- 9) FALSE
- 10) TRUE
- 11) FALSE
- 12) TRUE
- 13) C
- 14) B
- 15) C
- 16) B
- 17) C
- 18) A
- 19) A
- 20) B
- 21) D
- 22) C
- 23) C
- 24) A
- 25) B
- 26) B
- 27) B
- 28) A
- 29) D
- 30) C
- 31) D
- 32) B
- 33) C
- 34) A
- 35) B

## Answer Key

Testname: UNTITLED2

- 36) 1. Frees top management's time—by delegating responsibility for daily operations to unit managers, top management can concentrate on long-term strategic planning and higher-level decisions that affect the entire company.  
2. Supports use of expert knowledge—decentralization allows top management to hire the expertise each business unit needs to excel in its specific operations.  
3. Improves customer relations—unit managers focus on just one segment of the company; therefore, they can maintain close contact with important customers.  
4. Provides training—decentralization also provides unit managers with training and experience necessary to become effective top managers.  
5. Improves motivation and retention—empowering unit managers to make decisions increases managers' motivation and retention and improves job performance and satisfaction.
- 37) 1. Duplication of costs—decentralization may cause the company to duplicate certain costs or assets.  
2. Problems achieving goal congruence—goal congruence occurs when unit managers' goals align with top management's goals. Decentralized companies often struggle to achieve goal congruence. Unit managers may not fully understand the big picture of the company.
- 38) Through the use of effective performance evaluation systems.
- 39) Clearly communicate expectations  
Provide benchmarks that promote goal congruence and coordination  
Motivate managers
- 40) Cost centre - Controlling costs. The manager is evaluated on his or her ability to control *costs* by comparing actual costs to budgeted costs.

Revenue centre - Generating sales revenue. Revenue centre performance reports compare actual revenues to budgeted revenues.

Profit centre - Producing profit through generating sales and controlling costs. This manager is accountable for increasing sales revenue *and* controlling costs to achieve profit goals for the entire brand or service/product line.

Investment centre - Producing profit and managing the division's invested capital. Managers are responsible for (1) generating revenues, (2) controlling costs, and (3) efficiently managing the division's assets.

- 41) Cost centre - Human Resources Department; Accounting Department ; Production Department

Revenue centre - North American Sales Division at Bombardier; European Sales Division at McCain

Profit centre - Product line at Bombardier; individual corporate Prime restaurants

Investment centre - Company Divisions at McCain, such as Production, Transportation, and Commercial Sales

- 42) A  
43) A  
44) B  
45) A  
46) B  
47) TRUE  
48) FALSE  
49) TRUE  
50) FALSE  
51) TRUE  
52) TRUE

Answer Key

Testname: UNTITLED2

53) TRUE

54) TRUE

55) B

56) C

57) A

58) A

59) B

60) B

61) D

62) C

63) C

64) D

65) A

66) B

67) C

- 68) 1. Promoting goal congruence and coordination—As previously mentioned, decentralization increases the difficulty of achieving goal congruence. Unit managers may not always make decisions consistent with the overall goals of the organization. The performance measurement system should provide incentives for coordinating the subunits' activities and direct them toward achieving the overall company goals.
2. Communicating expectations—To make decisions that are consistent with the company's goals, unit managers must communicate the goals and the specific part that their units play in attaining those goals.
3. Motivating unit managers—Unit managers are usually motivated to make decisions that will help to achieve top management's expectations. For additional motivation, upper management may offer bonuses to unit managers who exceed performance targets.
4. Providing feedback—In decentralized companies, top management is no longer involved in the day-to-day operations of each subunit. Performance evaluation systems provide upper management with the feedback it needs to maintain control over the entire organization, even though it has delegated responsibility and decision-making authority to unit managers.
5. Benchmarking—Performance evaluation results are often used for benchmarking, which is the practice of comparing the unit's achievements against other company subunits, other companies in the same industry the best practices in the industry, or the subunit's past performance. By comparing current results against past performance, managers can assess whether their decisions are improving, having no effect, or adversely affecting subunit performance.

69) D

70) C

71) A

72) B

73) E

74) D

Answer Key

Testname: UNTITLED2

- 75) 1. Looks at past rather than future—Current financial performance tends to reveal the results of past actions rather than indicate future performance. For this reason, financial measures tend to be lag indicators rather than lead indicators. Management needs to know the results of past decisions, but it also needs to know how current decisions may affect the future. To adequately assess the performance of subunits, managers need lead indicators in addition to lag indicators.
2. Focuses on short-term rather than long-term—Another limitation of financial performance measures is that they tend to focus on the company's short-term achievements rather than on long-term performance. Financial statements are prepared on a monthly, quarterly, or annual basis. To remain competitive, top management needs clear signals that assess and predict the company's performance over longer periods of time.

- 76) TRUE  
77) TRUE  
78) TRUE  
79) TRUE  
80) TRUE  
81) TRUE  
82) FALSE  
83) D  
84) D  
85) A  
86) C  
87) A  
88) C  
89) C  
90) B  
91) D  
92) B  
93) C  
94) B  
95) C  
96) C  
97) A  
98) D  
99) C  
100) B  
101) A  
102) C  
103) A  
104) B  
105) A  
106) A

## Answer Key

Testname: UNTITLED2

### 107) Financial Perspective:

Return on assets, Profit per salesperson, Earnings per share

Customer perspective:

Number of new customers, Market channel profitability

Internal business perspective:

Percentage of defective product units, Number of patents, Percentage of on-time delivery by suppliers, Percentage of free invoices, Manufacture cycle time

Learning and growth perspective:

Employee turnover rate, Training hours per employee, Employee competence measures

Sustainability perspective:

Ecoefficient logistics, Quantity of product waste, Megawatt hours of electricity used, Percentage use of recyclable materials

- 108) 1. Financial Perspective—The financial perspective helps managers answer the question, how do we look to shareholders? The ultimate goal of a company is to generate income for its owners. The financial perspective focuses management's attention on KPIs that assess financial objectives such as revenue growth and cost cutting. Some commonly used KPIs include *sales revenue growth*, *gross margin growth*, and *return on investment*.
2. Customer Perspective—The customer perspective helps managers evaluate the question, how do customers see us? Customers are typically concerned with four specific product or service attributes: (1) the product's price, (2) the product's quality, (3) the sales service quality, and (4) the product's delivery time (the shorter the better). In addition to customer satisfaction ratings, the customer perspective is often measured using KPIs such as *percentage of market share*, *increase in the number of customers*, *number of repeat customers*, and *rate of on-time deliveries*.
3. Internal Business Perspective—The internal business perspective helps managers address the question, at what business processes must we excel to satisfy customer and financial objectives? The answer to that question incorporates three factors: (1) innovation, (2) operations, and (3) post-sales service. Internal Business Perspective KPIs might include: number of new products developed; manufacturing cycle time; defect rate; number of warranty claims; average time to respond to customer service requests.
4. Learning and Growth Perspective—The learning and growth perspective helps managers assess the question, can we continue to improve and create value? The learning and growth perspective focuses on three factors: (1) employee capabilities, (2) information system capabilities, and (3) the company's "climate for action." The learning and growth perspective measures employees' skills, knowledge, motivation, and empowerment. KPIs typically include *hours of employee training*, *employee satisfaction*, *employee turnover*, and *number of employee suggestions implemented*.
- Note: Student examples may vary.

Answer Key

Testname: UNTITLED2

109)

Perspective	Objective	KPI	Goal	Actual	Met (y or n)
Financial	Increase gross margin	Gross margin growth	24%	23%	n
	Increase profitability of core product line	Product line profit margin	18%	15%	n
Customer	Increase customer retention	Number of repeat customers	8,900	8,700	n
	Increase number of customers	Number of Customers	12,800	13,500	y
Internal Process	Improve post-sales service	Average repair time (in hours)	1.25	1.15	y
	Increase plant safety	Number of lost time accidents	1	3	n
Learning and growth	Improve employee morale	Employee turnover	5%	7.5%	n
	Improve employee job satisfaction	Employee satisfaction (1-5)	4	3.8	n

110) C

111) B

112) A

113) A

114) A

115) C

116) C

117) D

118) B

119) C

120) C

121) B

122) B

123) D

124) B

125) A

126) A

127) D



## Answer Key

Testname: UNTITLED2

- 128) D
- 129) B
- 130) B
- 131) A
- 132) C
- 133) A
- 134) C
- 135) B
- 136) D
- 137) A
- 138) A
- 139) B
- 140) D
- 141) C
- 142) C
- 143) A
- 144) D
- 145) B
- 146) TRUE
- 147) TRUE
- 148) FALSE
- 149) TRUE
- 150) TRUE
- 151) TRUE
- 152) FALSE
- 153) FALSE
- 154) TRUE
- 155) TRUE
- 156) A
- 157) B
- 158) C
- 159) A
- 160) C
- 161) B
- 162) B
- 163) C
- 164) A
- 165) D
- 166) B
- 167) A

Answer Key

Testname: UNTITLED2

168) Requirement 1:

Subunit - CobraST	Actual	Flexible Budget	Flexible Budget Variance (U or F)	Percentage* Variance (U or F)
Sales	\$243,000	\$225,000	\$18,000F	8.00%
Cost of goods sold	<u>130,000</u>	<u>125,000</u>	<u>5,000U</u>	4.00%
Gross margin	\$113,000	\$100,000	\$13,000F	13.00%
Operating expenses	<u>26,000</u>	<u>25,000</u>	<u>1,000U</u>	4.00%
Operating income before service department charges	\$87,000	\$75,000	12,000F	16.00%
Service department charges (allocated)	<u>17,500</u>	<u>12,500</u>	<u>5,000U</u>	40.00%
Operating income	<u>\$69,500</u>	<u>\$62,500</u>	<u>7,000F</u>	11.20%

\* Flexible budget variance/Flexible budget

Requirement 2:

This performance report includes both revenue and cost data; therefore, this subunit must be a profit centre.

Requirement 3:

The only line item (other than subtotals) that meets both criteria is service department charges. All others do not need investigated.

169) Requirement 1:

Subunit - CobraST	Actual	Flexible Budget	Flexible Budget Variance (U or F)	Percentage* Variance (U or F)
Sales	\$194,000	\$180,000	\$14,000F	7.78%
Cost of goods sold	<u>104,000</u>	<u>100,000</u>	<u>4,000U</u>	4.00%
Gross margin	\$90,000	\$80,000	\$10,000F	12.50%
Operating expenses	<u>21,000</u>	<u>20,000</u>	<u>1,000U</u>	5.00%
Operating income before service department charges	\$69,000	\$60,000	9,000F	15.00%
Service department charges (allocated)	<u>14,000</u>	<u>10,000</u>	<u>4,000U</u>	40.00%
Operating income	<u>\$55,000</u>	<u>\$50,000</u>	<u>5,000F</u>	10.00%

Requirement 2:

This performance report includes both revenue and cost data; therefore, this subunit must be a profit centre.

Requirement 3:

No line items (other than subtotals) meet both criteria, so no variances need be investigated.

Answer Key

Testname: UNTITLED2

170) Requirement 1:

Subunit - CobraST	Actual	Flexible Budget	Flexible Budget Variance (U or F)	Percentage* Variance (U or F)
Sales	\$180,000	\$194,000	\$14,000U	7.22%
Cost of goods sold	100,000	104,000	4,000F	3.85%
Gross margin	\$80,000	\$90,000	\$10,000U	11.11%
Operating expenses	20,000	21,000	1,000F	4.76%
Operating income before service department charges	\$60,000	\$69,000	9,000U	13.04%
Service department charges (allocated)	10,000	14,000	4,000F	28.57%
Operating income	\$50,000	\$55,000	5,000U	9.09%

Requirement 2:

This performance report includes both revenue and cost data; therefore, this subunit must be a profit centre.

Requirement 3:

No line items (other than subtotals) meet both criteria so no variances need be investigated

171) \$68,065

Sales at flexible budget production level	\$300,000
Flexible budget production level	93,000
Sales price per unit	\$3.2258
New level of sales	98,000
Total sales at new level of sales	\$316,129
Variable costs	\$150,000
Flexible budget production level	93,000
Variable cost per unit	\$1.612
New level of sales	98,000
Total variable costs at new level of sales	\$158,064
Total sales at new level of sales	\$316,129
Total variable costs at new level of sales	\$158,065
Fixed costs	\$90,000
Net income at new level of sales	\$68,064

# Answer Key

Testname: UNTITLED2

172) Revenue by product	Actual	Flexible Budget Variance	Flexible Budget	Sales Volume Variance	Master Budget
Hockey					
G1	\$262,000	\$ 1,000 F	\$261,000	\$ 11,000 F	\$ 250,000
G2	\$162,000	\$ 3,000 U	\$165,000	\$ 10,000 U	\$ 175,000
Figure					
S1	\$ 66,000	-\$ 1,000 U	\$ 67,000	\$ 1,000 U	\$ 68,000
S2	\$ 56,000	\$ 7,000 U	\$ 63,000	\$ 1,000 F	\$ 62,000
Recreation					
M1	\$ 35,000	\$ 4,000 F	\$ 31,000	\$ 1,000 U	\$ 32,000
L1	\$ 26,000	\$ 2,000 U	\$ 28,000	\$ 3,000 U	\$ 31,000
Total	\$607,000	\$ 8,000 U	\$615,000	\$ 3,000 U	\$ 618,000

173) There is only REvenue data, therefore it is a revenue centre

174) The Sales volume variance for: G1 (\$11,000); G2 (5.71%); L1 (9.68%)

The Flexible Budget Variance for S2 (11.29%); M1 (12.5%); L1 (6.45%)

175) FALSE

176) FALSE

177) TRUE

178) TRUE

179) TRUE

180) TRUE

181) TRUE

182) FALSE

183) FALSE

184) TRUE

185) FALSE

186) TRUE

187) FALSE

188) A

189) C

190) D

191) C

192) D

193) C

194) A

195) A

196) C

197) A

198) D

199) C

200) B

201) A

Answer Key

Testname: UNTITLED2

- 202) A
- 203) B
- 204) C
- 205) B
- 206) A
- 207) A
- 208) B
- 209) B
- 210) C
- 211) D
- 212) D
- 213) D
- 214) B
- 215) B
- 216) D
- 217) A
- 218) C
- 219) A
- 220) A
- 221) C
- 222) B
- 223) D
- 224) B
- 225) C
- 226) B
- 227) C
- 228) B
- 229) C
- 230) A
- 231) C
- 232) C
- 233) C
- 234) B
- 235) D
- 236) C
- 237) D
- 238) C
- 239) C
- 240) D
- 241) D
- 242) B
- 243) B

# Answer Key

Testname: UNTITLED2

244) C

245) A

246) B

247) A

248) D

249)

Part 1:	
Operating income	\$1,848,000
Divide by	Divide by
Sales	\$8,400,000
Profit margin	22.00%
Part 2:	
Sales	\$8,400,000
Divide by	Divide by
Total assets	\$3,500,000
Capital turnover	2.4

Part 3:	
Operating income	\$1,848,000
Divide by	Divide by
Total assets	\$3,500,000
Return on investment	52.80%

Part 4:	
Total assets	\$3,500,000
Target rate of return	12%
Target return	\$420,000
Operating income	\$1,848,000
Target return	\$(420,000)
Residual income	\$1,428,000

Part 5:	
	1
Effective tax rate	-40%
	60%
Operating income	\$1,848,000
Operating income after taxes	\$1,108,800
Total assets	\$3,500,000
Current liabilities	\$(850,000)
Assets less liabilities	\$2,650,000
Weighted average cost of capital	8%
Total capital	\$212,000
Operating income after taxes	\$1,108,800

Answer Key

Testname: UNTITLED2

Operating income after taxes	\$1,108,800
Total capital	\$(212,000)
Economic value added	\$896,800

250)

Part 1:	
Operating income	\$6,000,000
Divide by	Divide by
Total assets	\$10,000,000
Return on investment	60.00%
Part 2:	
Total assets	\$10,000,000
Target rate of return	14%
Target return	\$1,400,000
Operating income	\$6,000,000
Target return	\$(1,400,000)
Residual income	\$4,600,000

Part 3:	
Effective tax rate	- 35%
	65%
Operating income	\$6,000,000
Operating income after taxes	\$3,900,000
Total assets	\$10,000,000
Current liabilities	\$(3,000,000)
Assets less liabilities	\$7,000,000
Weighted average cost of capital	10%
Total capital	\$700,000
Operating income after taxes	\$3,900,000
Total capital	\$(700,000)
Economic value added	\$3,200,000

Answer Key

Testname: UNTITLED2

251)

<b>Part a:</b>	
Operating income	\$ 864,000
Divide by	Divide by
Sales	\$ 7,200,000
Sales margin	12.00%

<b>Part b:</b>	
Sales	\$ 7,200,000
Divide by	Divide by
Total assets	\$ 3,200,000
Capital turnover	2.25

<b>Part c:</b>	
Operating income	\$ 864,000
Divide by	Divide by
Total assets	\$ 3,200,000
Return on investment	27.00%

<b>Part d:</b>	
Total assets	\$ 3,200,000
Target rate of return	13%
Target return	\$ 416,000
Operating income	\$ 864,000
Target return	\$ (416,000)
Residual income	\$ 448,000

252)

<b>Part a:</b>	
Operating income	\$2,200,000
Divide by	Divide by
Total assets	\$4,000,000
Return on investment	55.00%
<b>Part b:</b>	
Total assets	\$4,000,000
Target rate of return	12%
Target return	\$480,000
Operating income	\$2,200,000
Target return	\$ (480,000)
Residual income	\$1,720,000



Answer Key

Testname: UNTITLED2

253)

	Alpha Company	Beta Industries	Capa Inc
Sales (S)	\$54,000	\$393,000 <sup>e</sup>	\$261,000
Operating income (OI)	\$21,600	\$58,950	\$26,100 <sup>i</sup>
Total assets (TA)	\$36,000	\$81,875 <sup>f</sup>	\$90,000 <sup>k</sup>
Profit margin (PM)	40% <sup>a</sup>	15%	10%
Asset turnover (AT)	1.5 <sup>b</sup>	4.8	2.9 <sup>k</sup>
Return on investment (ROI)	60% <sup>c</sup>	72% <sup>g</sup>	29%
Target rate of return	9%	20%	17% <sup>l</sup>
Residual income (RI)	\$18,360 <sup>d</sup>	\$42,575 <sup>h</sup>	\$10,800

Alpha Company computations:

<sup>a</sup>  $OI \div S$ ;  $\$21,600 \div \$54,000$

<sup>b</sup>  $S \div TA$ ;  $\$54,000 \div \$36,000$

<sup>c</sup>  $OI \div TA$ ;  $\$21,600 \div \$36,000$  OR  $PM \times AT$ ;  $40\% \times 1.5$

<sup>d</sup>  $OI - (TA \times \text{target rate of return})$ ;  $\$21,600 - (\$36,000 \times 9\%)$

Beta Industries computations:

<sup>e</sup>  $OI \div PM$ ;  $\$58,950 \div 15\%$

<sup>f</sup>  $S \div AT$ ;  $\$393,000 \div 4.8$

<sup>g</sup>  $OI \div TA$ ;  $\$58,950 \div \$81,875$  OR  $PM \times AT$ ;  $15\% \times 4.8$

<sup>h</sup>  $OI - (TA \times \text{target rate of return})$ ;  $\$58,950 - (\$81,875 \times 20\%)$

Capa Inc. Computations:

<sup>i</sup>  $S \times PM$ ;  $\$261,000 \times 10\%$

<sup>j</sup>  $OI \div ROI$ ;  $\$26,100 \div 29\%$

<sup>k</sup>  $S \div TA$ ;  $\$261,000 \div \$90,000$

<sup>l</sup>  $(RI - OI) \div -TA$ ;  $(\$10,800 - \$26,100) \div -\$90,000$

Answer Key

Testname: UNTITLED2

254)

	Alpha Company	Beta Industries	Capa Inc
Sales (S)	\$925,000	\$1,794,000 <sup>e</sup>	\$390,000
Operating income (OI)	\$64,750	\$179,400	\$70,200 <sup>i</sup>
Total assets (TA)	\$185,000	\$390,000 <sup>f</sup>	\$130,000
Profit margin (PM)	7% <sup>a</sup>	10%	18%
Asset turnover (AT)	5.0 <sup>b</sup>	4.6	3.0 <sup>k</sup>
Return on investment (ROI)	35% <sup>c</sup>	46% <sup>g</sup>	54%
Target rate of return	20%	25%	30% <sup>l</sup>
Residual income (RI)	\$27,750 <sup>d</sup>	\$81,900 <sup>h</sup>	\$31,200

Alpha Company computations:

<sup>a</sup>  $OI \div S$ ;  $\$64,750 \div \$925,000$

<sup>b</sup>  $S \div TA$ ;  $\$925,000 \div \$185,000$

<sup>c</sup>  $OI \div TA$ ;  $\$64,750 \div \$185,000$  OR  $PM \times AT$ ;  $7\% \times 5.0$

<sup>d</sup>  $OI - (TA \times \text{target rate of return})$ ;  $\$64,750 - (\$185,000 \times 20\%)$

Beta Industries computations:

<sup>e</sup>  $OI \div PM$ ;  $\$179,400 \div 10\%$

<sup>f</sup>  $S \div AT$ ;  $\$1,794,000 \div 4.6$

<sup>g</sup>  $OI \div TA$ ;  $\$179,400 \div \$390,000$  OR  $PM \times AT$ ;  $10\% \times 4.6$

<sup>h</sup>  $OI - (TA \times \text{target rate of return})$ ;  $\$179,400 - (\$390,000 \times 25\%)$

Capa Inc. Computations:

<sup>i</sup>  $S \times PM$ ;  $\$390,000 \times 18\%$

<sup>j</sup>  $OI \div ROI$ ;  $\$70,200 \div 54\%$

<sup>k</sup>  $S \div TA$ ;  $\$390,000 \div \$130,000$

<sup>l</sup>  $(RI - OI) \div -TA$ ;  $(\$31,200 - \$70,200) \div -\$130,000$

Answer Key

Testname: UNTITLED2

255)

	Comfy Inn	Hamton Inn	Night Inn
Sales (S)	\$600,000	\$840,000 <sup>e</sup>	\$1,500,000
Operating income (OI)	\$156,000	\$252,000	\$450,000 <sup>i</sup>
Total assets (TA)	\$400,000	\$1,400,000 <sup>f</sup>	\$2,250,000 <sup>j</sup>
Profit margin (PM)	26% <sup>a</sup>	30%	30%
Asset turnover (AT)	1.5 <sup>b</sup>	0.6	0.67 <sup>k</sup>
Return on investment (ROI)	39% <sup>c</sup>	18% <sup>g</sup>	20%
Target rate of return	25%	15.0%	18% <sup>l</sup>
Residual income (RI)	\$56,000 <sup>d</sup>	\$42,000 <sup>h</sup>	\$45,000

Comfy Inn computations:

<sup>a</sup>  $OI \div S$ ;  $\$156,000 \div \$600,000$

<sup>b</sup>  $S \div TA$ ;  $\$600,000 \div \$400,000$

<sup>c</sup>  $OI \div TA$ ;  $\$156,000 \div \$400,000$  OR  $PM \times AT$ ;  $26\% \times 1.5$

<sup>d</sup>  $OI - (TA \times \text{target rate of return})$ ;  $\$156,000 - (\$400,000 \times 25\%)$

Hamton Inn computations:

<sup>e</sup>  $OI \div PM$ ;  $\$252,000 \div 30\%$

<sup>f</sup>  $S \div AT$ ;  $\$840,000 \div 0.6$

<sup>g</sup>  $OI \div TA$ ;  $\$252,000 \div \$1,400,000$  OR  $PM \times AT$ ;  $30\% \times 0.6$

<sup>h</sup>  $OI - (TA \times \text{target rate of return})$ ;  $\$252,000 - (\$1,400,000 \times 15.0\%)$

Night Inn. Computations:

<sup>i</sup>  $S \times PM$ ;  $\$1,500,000 \times 30\%$

<sup>j</sup>  $OI \div ROI$ ;  $\$450,000 \div 20\%$

<sup>k</sup>  $S \div TA$ ;  $\$1,500,000 \div \$2,250,000$

<sup>l</sup>  $(RI - OI) \div -TA$ ;  $(\$45,000 - \$450,000) \div -\$2,250,000$

256)  $EVA = (\text{After-tax operating income}) - [(\text{Total assets} - \text{Current liabilities}) \times WACC\%]$

$$\begin{aligned}
 \text{Comfy's EVA} &= (\$156,000 \times 68\%) - [(\$400,000 - \$165,000) \times 17\%] \\
 &= \$106,080 - (\$235,000 \times 17\%) \\
 &= \$106,080 - \$39,950 \\
 &= \$66,130
 \end{aligned}$$

257)  $EVA = (\text{After-tax operating income}) - [(\text{Total assets} - \text{Current liabilities}) \times WACC\%]$

$$\begin{aligned}
 \text{Hamton's EVA} &= (\$560,000 \times 68\%) - [(\$2,250,000 - \$250,000) \times 17\%] \\
 &= \$380,800 - (\$2,000,000 \times 17\%) \\
 &= \$380,800 - \$340,000 \\
 &= \$40,800
 \end{aligned}$$

## Answer Key

Testname: UNTITLED2

$$258) \text{ EVA} = (\text{After-tax operating income}) - [(\text{Total assets} - \text{Current liabilities}) \times \text{WACC}\%]$$

$$\begin{aligned}\text{Night's EVA} &= (\$540,000 \times 68\%) - [(\$1,400,000 - \$250,000) \times 17\%] \\ &= \$367,200 - (\$1,150,000 \times 17\%) \\ &= \$367,200 - \$340,000 \\ &= \$27,200\end{aligned}$$

$$259) \text{ EVA} = (\text{After-tax operating income}) - [(\text{Total assets} - \text{Current liabilities}) \times \text{WACC}\%]$$

$$\begin{aligned}\text{Alpha Company's EVA} &= (\$64,750 \times 68\%) - [(\$185,000 - \$25,000) \times 17\%] \\ &= \$44,030 - (\$160,000 \times 17\%) \\ &= \$44,030 - \$27,200 \\ &= \$16,830\end{aligned}$$

$$260) \text{ EVA} = (\text{After-tax operating income}) - [(\text{Total assets} - \text{Current liabilities}) \times \text{WACC}\%]$$

$$\begin{aligned}\text{Alpha Company's EVA} &= (\$179,400 \times 68\%) - [(\$390,000 - \$40,000) \times 17\%] \\ &= \$121,992 - (\$350,000 \times 17\%) \\ &= \$121,992 - \$59,500 \\ &= \$62,492\end{aligned}$$

$$261) \text{ EVA} = (\text{After-tax operating income}) - [(\text{Total assets} - \text{Current liabilities}) \times \text{WACC}\%]$$

$$\begin{aligned}\text{Alpha Company's EVA} &= (\$34,000 \times 68\%) - [(\$130,000 - \$15,000) \times 17\%] \\ &= \$23,120 - (\$115,000 \times 17\%) \\ &= \$23,120 - \$19,550 \\ &= \$3,570\end{aligned}$$

262) The financial measures are lagging indicators.

There is an issue with selecting an asset value to use in the calculations - total assets, totals assets less non-productive assets, year end assets, net assets, average assets through the period.

The financial measures often have a short term focus. Some products may not be successful early in their product life c